Technical Memorandum

Surface Impoundment Cap Evaluation for Erosion

Gulfco Marine Maintenance Superfund Site
906 Marlin Avenue
Freeport, Brazoria County, Texas
EPA Identification No. TXD0055144539

Non-Time Critical Removal Support
Contract: EP-W-06-004
Task Order: 0067-NSEE-06JZ

Prepared for

U.S. Environmental Protection Agency
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1.0 INTRODUCTION

This technical memorandum documents the visual observations of the Surface Impoundment Cap performed by EA Engineering, Science, and Technology, Inc. (EA) for the former Gulfco Marine Site (Site) located in Freeport, Brazoria County, Texas. Inspection of the CAP was conducted on 15 December 2010. This work was completed for the U.S. Environmental Protection Agency (EPA) Region 6 as part of Task Order No. 0067-NSEE-06JZ under EPA Contract No. EP-W-06-004, in accordance with a Statement of Work (SOW) issued by EPA in October 2010.

The site consists of approximately 40 acres within the 100-year coastal floodplain along the north bank of the Intracoastal Waterway between Oyster Creek to the east and the Old Brazos River Channel to the west. During the 1960's, the Site was used for occasional welding and was used as a barge cleaning facility 1971 through 1999. Occasional sandblasting and barge repair/refurbish also occurred onsite. The surface impoundments were closed under the Texas Water Commission's (Texas Commission on Environmental Quality (TCEQ) predecessor agency) direction in 1982 (PBW, 2010). Previous reports and observations have document erosion and or rutting in the cover.

2.0 SURFACE IMPOUNDMENT COVER EVALUATION

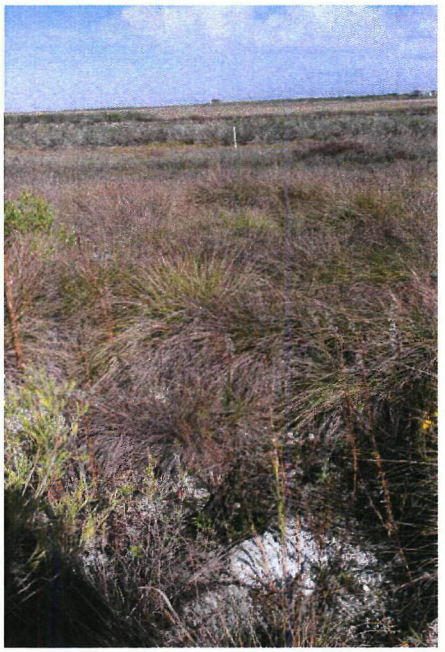
A visual Site reconnaissance was performed on 15 December 2010 by John Conquest, a State of Texas licensed Professional Engineer. The primary objective of the site visit was to visually observe the existing conditions.

2.1 EXISTING CONDITIONS

The elevation of the surface impoundment cap is approximately 2 feet higher than the surrounding existing natural surface grade. The existing cap is approximately 2.5 to 3.5 feet thick. The clay cap appeared to be in good condition with no surface cracking during the site investigation. The photo below shows the typical elevation differences between the cap (photo right) and the surrounding areas (photo left).

2.2 VEGETATION

The surface of the clay cap is covered with a layer of oyster shells and vegetation. Cap vegetation consists of mostly grasses with some brush. The majority of the brush is located along the perimeter of the cap with isolated patches within the interior portions of the cap. The photo below shows typical cap vegetation.



2.3 VEHICULAR TRAFFIC

Evidence of vehicular traffic along the perimeter of the cap was observed during the site investigation. Wheel tracks have formed ruts in portions of the vegetation along the western side of the cap. The rutting was generally no more than 3 inches deep with one location found to be approximately 6 inches deep. The photo below is an example of typical vehicle paths through the ground cover.

The photo below details the area of deepest rutting (approximately 6-inches).

2.4 SURROUNDING AREA

The perimeter of the cap was inspected during site reconnaissance. It was found to be in good condition with no visible rill erosion.

REFERENCES

Pastor, Behling & Wheeler, LLC (PBW). 2010. Final Screening-Level Ecological Risk Assessment, Gulfco Marine Maintenance Superfund Site, Freeport, Brazoria County, Texas, EPA Facility ID: TXD0055144539, May.

EPA. 2010. RAC II Statement of Work for Non-Time Removal Support, Gulfco Marine Maintenance, Freeport, Texas. Contract No. EP-W-06-004. 6 October.